

Dance Science Final Project

Proposed by Nicole Becker

Primary Reader: Sarah DiPasquale

Secondary Reader: Patricia Fehling

Description of Final Project

Background information

I proposed my self-determined major, Dance Science, in the Spring semester of my freshman year with the hope of utilizing the incredible resources and opportunities available to me at Skidmore College to obtain a thorough understanding of the dance science field. Throughout my academic career, I have been fortunate enough to take many courses that have exposed me to various facets and developments in dance medicine and science. Therefore, I felt that conducting my own dance science research with the hopes of personally contributing to the field of dance medicine and science would be an appropriate culmination of my studies.

Under the guidance of Professor Sarah DiPasquale, a Lecturer in Dance and physical therapist who specializes in dance injuries, I wrote an IRB proposal for this research study that received approval in February 2014. This letter of approval can be found at the end of this proposal. The research proposed was a self-report injury surveillance study to obtain an understanding of the types and trends of the injuries plaguing the Skidmore Dance Department. This plan was discussed with Professor Faustini in the Spring semester of my sophomore year prior to the commencement of data collection.

The method of a self-report survey was used because dancers view injuries as a necessary sacrifice for participating in the art form and, therefore, may be hesitant to report an injury due to fear of missing a performance opportunity or artistic achievements in a technique class.^{1, 2} A previous study on ballet and modern collegiate dancers utilized the self-report method to track injuries and found a 97% injury rate, which is in agreement with other literature.² It was also found that more than twice as many collegiate dance students are willing to self-report an injury privately than to a medical clinic.^{2, 3}

Data was collected during the Fall and Spring semesters of the 2014-2015 academic year. The data collected from the Fall semester was analyzed by myself and two other students under the guidance of Professor DiPasquale and has been accepted for poster presentations at two conferences as well as a journal publication in *Medical Problems of Performing Artists*. From the beginning, the plan was for me to continue data collection independently in the Spring semester, so that I would have a full year of data to analyze for my Final Project.

Justification of Final Project

Though dance is a performance art, there is no question about the athleticism and endurance that it requires.⁴ Furthermore, physical pain and injury are part of the daily routine for dancers. Training in dance consists of intermittent brief exercise bouts of both dynamic and static work that utilize small and large muscle groups.⁵ This highly physical demand accompanied by artistic stressors creates such a high potential risk of injury that dancers have one of the highest injury rates among athletes.⁴⁻⁷ This can be explained by a multitude of intrinsic and extrinsic risk factors including anatomical characteristics, medical history, menstrual history, dance experience, length of dance training, fatigue, diet, and stress.^{8, 9} The main injury types are overuse and strain, which cause 60% to 70% of all dance injuries.^{9, 11, 12}

Fatigue, too, is an especially large contributor to the high percentage of dance related injuries, as there is a known correlation between fatigue and injury occurrence.¹³ Both fatigue and overuse are direct results of overtraining syndrome, which presents as a sudden decrease in performance that cannot be attributed to illness or injury. Inadequate rest for the individual's training load most often results in overtraining, commonly referred to as "burnout." This may contribute an increased predisposition to musculoskeletal injuries.^{5, 13} Excessive ranges of joint motion make an individual more prone to injury, so one cannot reasonably expect to eliminate all injury occurrences from dance. However, with increased research, it may be possible to reduce the dancer's number of injuries and the recovery time.⁸ It is essential to monitor injuries because the most common predisposing factor to future injury is an injury.¹⁴ As collegiate

dancers are exposed to all of these variables, they are at an increased risk for injury.

A direct positive correlation has also been reported between injury prevalence and age. More injuries tend to occur within later stages of training and with an increase in the amount of techniques studied by the individual. Though variety is important to a dancer's career, a relationship has been found between the number of techniques a dancer is studying and the likelihood that the dancer is currently injured.⁹ Thomas et al. found that 31% of dancers studying three techniques are currently injured, 47% studying four techniques, 40% studying five techniques, 43% studying six techniques, and 100% studying seven techniques.⁹ Skidmore Dance majors are encouraged to take as many technique classes and participate in as many performance opportunities as their schedules allow, so it is hypothesized that both fatigue and overuse are prominent causes of injury in the department each year.

My main focus of this project will be on the injury trends of collegiate dancers compared to collegiate athletes. Moreover, I am currently in the process of obtaining injury trend data on Skidmore athletes for the 2014-2015 academic year, which will enable me to directly compare Skidmore dancers to Skidmore students. This comparison is interesting because dancers do not have training cycles, but rather train at the same intensity throughout the academic year. However athletes observe periodization: pre-season, season, post-season, and off-season. Comparing the injury trends of these two groups will enable me to explore the effects of periodization and whether or not it would be beneficial for dancers to observe this training style. Though research has been done to explore the injury trends of athletes and dancers, separately, research has not been done to compare the trends of liberal arts college athletes to liberal arts college dancers. The findings of this research may be beneficial to the training of both collegiate athletes and dancers.

The importance of this research can be seen through the success of the data from the first half of the year. However, looking at only one semester of an academic year of training does not provide a complete picture. My plan to analyze the injury trends of the full academic year (2014-2015) may enable the Skidmore Dance Department and similarly structured collegiate dance departments to be better equipped to prevent and treat future injuries. A complete injury surveillance and risk assessment is necessary to directly aid injury prevention.^{7, 13} Besides collecting data on when the injury occurred and the mechanistic cause, whether the dancer would seek professional medical help was also examined. My final project will be presented in the form of an article and I plan to submit my research for publication.

Purpose

The purpose of this study is to analyze the injury trends of collegiate dancers in comparison to collegiate athletes to determine the effects of periodization. It was hypothesized that collegiate dancers, compared to collegiate athletes, would experience a greater rate of injury at the beginning and ending of an academic year due to fatigue and overuse, respectively.

Methodology

Students registered in at least one Skidmore dance department technique course during the Fall 2014 and Spring 2015 semesters were eligible to participate in this study. Participants were notified of this study both online and in person at the beginning of each semester and were reminded throughout via posters, emails, and Facebook. In these notifications, an injury was defined for the participants as "pain that prevents you from fully participating in your movement/dance classes." Students were not compensated for their participation. This study was approved by Skidmore College Institutional Review Board. The IRB approval can be found at the end of this proposal.

Participants completed an injury questionnaire subsequent to any dance related injury occurring during the 2014-2015 academic year. This form was available as a hard copy in paper

and online via the online survey systems Survey Monkey and Qualtrics during the Fall and Spring semesters, respectively. Participants had the option to skip questions and exit the web survey at any time, negating their submission without penalty. Data was collected anonymously and the web survey collected data without saving participants IP addresses. All online data was initially stored on Skidmore College's password protected faculty account on the Survey Monkey and Qualtrics databases. The hard copy and online data were then merged into one document and kept in a password-protected file. In total, 83 injury surveys were submitted. A copy of the injury surveillance self-report form can be found on the following page.

Statistical analysis will be done using SPSS Version 22 to compare the amount of injuries per month of dancers to those obtained by athletes. Professor Susanne D'Isabel of the Health and Exercise Sciences Department has agreed to assist in determining proper statistical analyses.

Please fill in or circle the relevant information

Today's Date: _____

Time of Injury:

6am-8am 10am-12pm 2pm-4pm 6pm-8pm 10pm-12am 2am-4am
 8am-10am 12pm-2pm 4pm-6pm 8pm-10pm 12am-2am 4am-6am

Age: 18 19 20 21 22 23 Other (specify): ____

Sex: Female Male Other (specify): _____

Age you began dancing:

0-2 years old 4-6 years old 8-10 years old 12-14 years old 16-18 years old 20-22 years old
 2-4 years old 6-8 years old 10-12 years old 14-16 years old 18-20 years old
 Other (specify): ____

Affiliation with Skidmore Dance Department: Major Minor Neither

Injury (specify body part): Left/ Right

Neck Shoulder Arm Foot Ribs Upper Back Pelvis Groin Hip Thigh
 Lower Back Lower Leg Knee Ankle

Have you injured this body part before: Yes No

If yes, explain:

Activity Injury Occurred: Rehearsal Performance Class Non-dance

Other (specify): _____

Specify genre: Ballet Modern Contemporary Ballet Jazz
 Tap

Other (specify): _____

Shoes: None Soft Ballet Pointe Other (specify): _____

Professor/Teacher Present During Injury Occurrence: _____

Injury Location: Studio DS1 Studio DSII Dance Theatre Other (specify): _____

Mechanism of Injury: Overuse Collision Lift Jump Landing
 Slip Fall Partnering Stretching Twisting Turning Alignment
 Unknown

How you plan on treating your injury (please be honest):

Would you see an athletic trainer/ PT if one were on campus? Yes No

Do you plan on seeking medical treatment off campus? Yes No

Preliminary Annotated Bibliography

1. Aalten A. In the presence of the body: theorizing training, injuries and pain in ballet. *Dance Res J.* 2005;37(2):55-72.

Aalten et al.'s article explores the culture of dance and how injuries are dealt with in this field. This paper provides a deep understanding of why dancers may dance through pain and injuries, and not seek professional medical help. The insight provided in this paper will allow me to better explain how injuries are viewed by dancers and propose explanations for the trends found in my data about how the dancers planned to treat their injury.

2. Ambegaonkar JP. Dance Medicine: At the University Level. *Dance Res J.* 2005;37(2):113-119.

This study looks at the presence of dance medicine in universities; specifically the prevalence of certain types of injuries and the access to healthcare available to dancers. This article also provides a history of dance medicine and suggestions for what it can become. I would use this data to shape my suggestions for minimizing injury occurrence and providing better resources to dancers.

3. Askling C, Lund H, Saartok T, Thorstensson A. Self-reported hamstring injuries in student dancers. *Scan J Med Sci Spor.* 2002;12(4):230-235.

This article explains a study that utilized a self-report method to analyze hamstring injuries in ballet dancers. The data collected showed a high prevalence of injuries as well as the need for better education for dancers on how to properly prepare themselves for their physical work. This study supports my hypothesis that dancers have a high prevalence of injuries due to improper conditioning and that a training cycle more similar to that of collegiate athletes may be beneficial.

4. Russell JA. Preventing dance injuries. *Open access J Sports Med.* 2013; 4: 199-210.

Russell et al.'s article focuses on the difference between dancers and traditional athletes, providing reasoning for why injury rates may be different. This information will help me compare and contrast the differences between the injury patterns of collegiate dancers and collegiate athletes. So too, Russell et al. suggests an injury prevention protocol for dancers that utilizes aspects from the traditional training cycle of athletes. This information will be important for my discussion of whether or not dancers would benefit from following a more traditional training protocol.

5. Wilson M, Deckert J. A screening program for dancers administered by dancers. *J Dance Med Sci.* 2009;13(3):67-72.

This article recommends procedures for collecting data on injuries in the hopes of obtaining a better understanding of dance injuries, which would enable prevention protocols to be developed. Recommendations made in this article were utilized in the development of my research design.

6. Air ME, Grierson MJ, Davenport KL, Krabak BJ. Dissecting the Doctor-Dancer Relationship. *PM&R.* 2013;6(3):241-9.

In this article, the relationship between dancers and medical professionals was studied. It was found that dancers consider asking their dance teacher about an injury the first line of injury treatment and that only 17.7% of injuries were evaluated by a doctor. This data will assist

me in analyzing the survey results of when the dancers were asked if they were planning on seeking professional medical help.

7. Dick R, Agel J, Marshall S. National Collegiate Athletic Association Injury Surveillance System Commentaries: Introduction and Methods. *J Athl Train*. 2007;42(2):173-182.

This article contributes to my comparison of traditional collegiate athletes and dancers, as it explains how NCAA athletes view and cope with injuries. It also provides the definition of an injury that the National Collegiate Athletic Association Injury Surveillance System uses, which is "a physical pain that causes restriction of the student-athlete's participation or performance for one or more calendar days beyond the day of the injury." This information and definition are both important to my comparison.

8. Laws H. *Fit to Dance 2: Report of the Second National Inquiry into Dancers' Health and Injury in the UK*. London: Dance UK, 2005, p. 10.

This research contributes to understanding of the culture of dance injuries: how they are viewed and dealt with. This study found that the definition of an injury agreed upon by most dancers was, "a physical problem derived from stress or other causes to do with performance, rehearsal, or training that affect one's ability to participate fully and without pain in normal training, performance, or physical activity." I plan to use this as I compare how injuries are dealt with in dance versus injuries in traditional sports.

9. Thomas H, Tarr J. Dancers' perceptions of pain and injury. *J Dance Med Sci*. 2009;13(2):51-59.

In this article, Thomas et al. presents data on how dancers treat injuries and why. This study design included a questionnaire, semi-structured interviews, and a body mapping and scanning process on 244 dancer participants. The data obtained is important to my analysis of the injury trends present in my data, as it will allow me to offer possible explanations for injury prevalence and treatment trends.

10. Twitchett E, Brodrick A, Nevill AM, Koutedakis Y, Angioni M, Wyon M. Does physical fitness affect injury occurrence and time loss due to injury in elite vocational ballet students? *J Dance Med Sci*. 2010;14(1):26-31.

This study found that aerobic fitness is associated with the number of injuries sustained. This research will be important as I analyze my data and compare it to collegiate athletes and explore if a more traditional training cycle (which includes exercises that focus on improving aerobic fitness) will be likely to prevent injuries in dancers.

11. Liederbach M. Perspectives on dance science rehabilitation. *J Dance Med Sci*. 2010;14(3):114-124.

This article focuses on reconditioning and rehabilitation of dancers after an injury as well as in regards to injury prevention. Because I am analyzing the training cycle of dancers compared to athletes and the prevalence of injuries, this article will allow me to further compare how injuries are treated in dance compared to general athletics.

12. Angioi M, Metsios GS, Koutedakis Y, Twitchett E, Wyon M. Physical fitness and severity of injuries in contemporary dance. *Med Probl Perform Art*. 2009;24(1):26-29.

This study looks at the physical fitness of dancers (flexibility, aerobic capacity, muscular power, and muscular endurance) in relationship to the amount of injuries suffered. The data presented supports my hypothesis, that dancers would suffer fewer injuries if they observed a more traditional training cycle where fitness was a focus before in-season (intense levels of dancing).

13. Bronner S, Ojofeiti S, Rose D. Injuries in a modern dance company: effect of comprehensive management on injury incidence and time loss. *Amer J Sports Med*. 2003;31(3):365-373.

Bronner et al.'s study examines injury prevalence in a modern dance company and the effect of comprehensive management on injury incidence and recovery period. The main finding from this study was that a comprehensive management system for injured dancers would decrease the incidence of injuries and recovery time. Furthermore, this study examined which types of injuries were most common. Because Skidmore dancers primarily take ballet and modern courses, it is important to compare my data to both studies conducted with ballerinas and modern dancer participants. This study enables me to compare data on which body parts were injured most and by what mechanism.

14. Weigert B, Erikson M. Incidence of injuries in university-level modern dancers and the effectiveness of a screening program in altering injury patterns. *Med Probl Perform Art*. 2007;22(2):52-57.

This research looks at injury prevalence in university-level modern dancers for a full academic year. Because my data was collected for the same duration and with dancers of approximately the same age and environment, I can compare my data to the data collected in this research. This article also explores ways to minimize injury occurrence, which is a secondary focus of my research.

15. Kerr G, Krasnow D, Mainwaring L. The nature of dance injuries. *Med Probl Perform Artists*. 1992;7(1):25-29.

The research studied the number, severity, and anatomical location of injuries, and the relationship between postural alignment and injuries of thirty-nine university students majoring in dance. This research was conducted over two decades ago on comparable participants, so I am interested in comparing the training and environments, and determining the possible affects on injury trends.

16. Liederbach M, Richardson M. The importance of standardized injury reporting in dance. *J Dance Med Sci*. 2007;11(2):45-48.

In this article, Liederbach et al. explains how collecting data on injury trends can assist in future injury prevention protocols. This article articulately explains the importance of tracking injuries and how this data can be used proactively, which supports my research. As well, I was able to use many of the data collection recommendations presented.

17. Luke A, Kinney S, D'Hemecourt P, Baum J, Owen M, Micheli L. Determinants of Injuries in Young Dancers. *Med Probl Perform Art*. 2002;17(2):105-112.

This article collected injury data on high school dancers for nine consecutive months by self-reports and formally reported injury surveys. This article discusses the benefits and hindrances of each type of report method. It also analyzes the injury trends to which I can compare my data. The strongest asset of this study is the analysis of which injury mechanisms were most common. I am interested in exploring if the most common injury mechanisms changed as dancers matured from high school into college, and what that may mean for injury prevention.

18. Bronner S, Ojofietimi S, Mayers L. Comprehensive surveillance of dance injuries. *J Dance Med Sci*. 2006;10(3&4):69-80.

This article examines the most effective ways to collect data on dance injuries. The dance injury survey form I created and used was devised using the suggestions made within this article.

19. Ekegren CL, Quested R, Brodrick A: Injuries in pre-professional ballet dancers: incidence, characteristics and consequences. *Journal of Science and Medicine in Sport*, 2014;17(3), 271-275.

This study evaluates the rates and risks of injuries, the amount of time spent participating in dance, and the characteristics and consequences of injuries among elite pre-professional ballet students. The main reason I have included this article is that it compares injury trends of elite pre-professional ballet students to elite athletes of similar age. I am going to compare the injury trends of collegiate dancers to that of collegiate athletes and am curious as to whether the results are similar to the comparison between non-collegiate elite dancers and athletes.

20. Liederbach M, Hagins M, Gamboa JM et al. Assessing and reporting dancer capacities, risk factors, and injuries: Recommendations from the IADMS standard measures consensus initiative. *J Dance Med Sci*. 2012;16(4):139–153.

This article outlines new procedures that are recommended by the International Association of Dance Medicine and Science for collecting data on injuries in the hopes of building a better understanding of issues plaguing dancers. Though I did not have the resources to abide by every suggestion, I used this paper to help determine some of my methodologies.

21. Dick R, Angel J, Marshall SW. National Collegiate Athletic Association injury surveillance system commentaries. *J Athl Training*. 2007; 42(2): 173-182.

This article contains information on the training cycle (pre-season, in-season, post-season, and off-season) observed by collegiate athletes. It also provides data on injury prevalence, including type, in an academic year. I will compare my data to that presented in this article while I explore if dancers should follow a similar training cycle.

22. Liederbach M, Schanfein L, Kremenic IJ. What is known about the effect of fatigue on injury occurrence among dancers? *J Dance Med Sci*. 2013;14(3):101-108.

This research explores the effects of fatigue on injury occurrences among dancers. I plan to use this data along with my own data to determine if I believe that fatigue is a main risk factor. This is important to my discussion on whether following a training cycle more similar to athletes, which includes training at various intensities, would be beneficial to dancers.

23. Baker J. Self-reported and reported injury patterns in contemporary dance students. *Med Probl Perform Art*. 2010;25(1):10-15.

This article describes research to which I will compare my data directly. Using a self-reported survey similar to the one I used, data was collected on injury trends throughout an entire academic year at a contemporary dance conservatory. Because the participants are of comparable age and the duration of the study is equivalent, comparing data will allow me to determine if injury trends are different in a liberal arts dance department as compared to a conservatory.

24. Yang J, Tibbetts AS, Covassin T, Cheng G, Nayar S, Heiden E. Epidemiology of Overuse and Acute Injuries Among Competitive Collegiate Athletes. *J Athl Train*. 2012;47(2):198-204.

This article analyzes injury data collected from collegiate athletes over one academic year. The study recorded the prevalence of overuse as well as acute injuries. I plan on comparing my data to this data in my comparison of injuries in collegiate dancers to athletes.

References

1. Russell JA. Preventing dance injuries. *Open access J Sports Med.* 2013; 4: 199-210.
2. Weigert B, Erikson M. Incidence of injuries in university-level modern dancers and the effectiveness of a screening program in altering injury patterns. *Med Probl Perform Ar.* 2007; 22(2): 52-57.
3. Liederbach M, Richardson M. The importance of standardized injury reporting in dance. *J Dance Med Sci.* 2007; 11(2): 45-48.
4. Ambegaonkar JP. Dance Medicine: At the University Level. *Dance Res J.* 2005; 37(2): 113-119.
5. Askling C, Lund H, Saartok T, Thorstensson A. Self-reported hamstring injuries in student dancers. *Scan J Med Sci Spor.* 2002; 12:230-235.
6. Air ME, Grierson MJ, Davenport KL, Krabak BJ. Dissecting the Doctor-Dancer Relationship. *PM&R.* 2013; (13): 1-9.
7. Bronner S, Ojofietimi S, Mayers L. Comprehensive surveillance of dance injuries. *J Dance Med Sci.* 2006; 10(3&4): 69-80.
8. Twitchett E, Brodrick A, Nevill AM, Koutedakis Y, Angioni M, Wyon M. Does physical fitness affect injury occurrence and time loss due to injury in elite vocational ballet students? *J Dance Med Sci.* 2010; 14(1): 26-31
9. Thomas H, Tarr J. Dancers' perceptions of pain and injury. *J Dance Med Sci.* 2009; 13(2): 51-59.
10. Liederbach M. Perspectives on dance science rehabilitation. *J Dance Med Sci.* 2010; 14(3): 114-124
11. Angioi M, Metsios GS, Koutedakis Y, Twitchett E, Wyon M. Physical fitness and severity of injuries in contemporary dance. *Med Probl Perform Ar.* 2009; 24(1): 26-29.
12. Bronner S, Ojofeitimi S, Rose D. Injuries in a modern dance company: effect of comprehensive management on injury incidence and time loss. *Amer J Sports Med.* 2003; 31(3): 365-373.
13. Liederbach M, Schanfein L, Kremenec IJ. What is known about the effect of fatigue on injury occurrence among dancers? *J Dance Med Sci.* 2013; 14(3): 101-108.
14. Baker J. Self-reported and reported injury patterns in contemporary dance students. *Med Probl Perform A.* 2010; 25(1): 10-15.

**SKIDMORE COLLEGE
INFORMED CONSENT FORM**

**Self-reported injury and management in a collegiate dance department
Consent Form**

1. INTRODUCTION

You are invited to be a participant in a research study about the prevalence and occurrence of dance injuries within the Skidmore Dance Department. You were selected as a possible participant because you are enrolled in a Skidmore College dance course. We ask that you read this document and ask any questions you may have before agreeing to be in the study. The study is being conducted by Dr. Sarah DiPasquale, PT, DPT, Nicole Becker (class of 2016), Kim Sauers (class of 2015), and Meghan Wojtkejwicz (class of 2016).

2. BACKGROUND

The purpose of this study is to provide important data for the Skidmore Dance Department to utilize and offer better health and safety policies for the dancers. A dance injury surveillance study that involves the collection of data related to the factors associated with and the occurrence of the injury is essential to the prevention of dance injuries. It will catalog conditions related to each specific injury and provide a comprehensive way of recording injury incidence. A complete injury surveillance and risk assessment is necessary to directly aid injury prevention. With the results of this injury surveillance, the Skidmore dance department will be better equipped to prevent and treat future injuries.

3. DURATION

The length of time that you will be involved with this study is dependent on the number of injuries that you sustain during the Fall 2014 semester. It is anticipated that each injury surveillance report form should take no longer than 5 minutes to complete.

4. PROCEDURES

If you agree to be in this study, we will ask you to complete an injury questionnaire after any dance related injury occurring during the Fall 2014 semester.

You may complete an injury questionnaire and deposit in into one of three boxes located in Dance Studio I, Dance Studio II, or in the lobby between the two dance studios. Not all questions have to be answered. If you choose to complete this survey online, the survey will allow you to skip or not answer questions.

5. RISKS/BENEFITS

This study has the following risks:

There are no known physical, psychological or social risks involved in participating in this study.

The benefits of participation are: With the results of this injury surveillance, the Skidmore dance department will be better equipped to prevent and treat future injuries. Previous studies have shown that

by analyzing injury data from self-reports and educating dancers, it is possible to significantly decrease overuse, fatigue, and trauma injuries.

6. CONFIDENTIALITY

The records of this study will be kept private. All completed forms should be deposited into one of three locked boxes located in Dance Studio I, Dance studio II, and in the lobby between the two dance studios. Only the researchers will have access to the submitted injury forms. Each week, the questionnaires will be compiled from the locked boxes and the information you provide in the questionnaire will be transferred into a password protected database. Once the data has been inputted into the database, your questionnaire will be destroyed. In any sort of report that is published or presentation that is given, we will not include any information that will make it possible to identify you as a participant. Additionally, you will not include your name on this survey form to assure complete anonymity.

The forms submitted via the online web survey cannot be guaranteed confidentiality or anonymity. The researchers have taken all reasonable measures to protect your identity and responses. For example, the data is SSL encrypted, it is stored on a password protected database, and IP addresses are not collected. However, e-mail and the Internet are not 100% secure, so it is also suggested that you clear the computer's cache and browser history to protect your privacy after completing the survey.

7. VOLUNTARY NATURE OF THE STUDY

Your decision whether or not to participate will not affect your current or future relations with Skidmore College or any of its representatives. If you decide to participate in this study, you are free to withdraw from the study at any time without affecting those relationships. You are able to discard a form before placing it into the locked box and the web survey offers you the choice, at the end, to submit your response or not. If you choose not to submit your response, the web survey is set up so those responses are not saved to the server.

Your participation or withdrawal from this study will have absolutely no effect on your grade in any of your dance courses or your relationship with your professors or classmates in this department.

8. CONTACTS AND QUESTIONS

The researcher(s) conducting this study are Dr. Sarah DiPasquale PT, DPT, Nicole Becker (class of 2016), Kim Sauers (class of 2015), and Meghan Wojtkeiwicz (class of 2016). You may ask any questions you have right now. If you have questions later, you may contact Dr. Sarah DiPasquale at 518-598-8700 or sdipasqu@skidmore.edu.

If you have questions or concerns regarding this study and would like to speak with someone other than the researcher(s), you may contact Dr. Mark S. Rye, Institutional Review Board Chair, Skidmore College, 815 N. Broadway, Saratoga Springs, NY 12866, phone 518-580-8308, e-mail mrye@skidmore.edu. You may also contact the chair of the Dance Department, Debra Fernandez, phone 518-580-5377, email dfernand@skidmore.edu.

9. STATEMENT OF CONSENT

You will be given a copy of this form to keep for your records.

The procedures of this study have been explained to me and my questions have been addressed. The information that I provide is confidential and will be used for research purposes only. I understand that my participation is voluntary and that I may withdraw anytime without penalty. If I have any concerns about my experience in this study (e.g., that I was treated unfairly or felt threatened), I may contact the Chair of the Institutional Review Board or the Chair of the sponsoring department of this research regarding my concerns.

Participant signature_____ **Date**_____

Signature of Person Obtaining Consent

_____ **Date**_____

